

B<sup>13</sup> 55. A method for decreasing the cholesterol content of chicken meat produced by edible chickens, which comprises feeding the productivity improver of claim 1 to said edible chickens. --

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REMARKS

**Status of the Claims**

Claims 1, 3, 4, 6-12 and 24-55 are pending in the present application. Claims 2, 5 and 13-23 have been cancelled. The subject matter of claims 2 and 5 has been incorporated into claim 1. The subject matter of claims 13-23 provides the basis for new claims 41-55.

**Specification**

The Examiner objects to the terms "producibility" and "liveability" as they "are not English words." The objection to the specification is respectfully traversed. Reconsideration and withdrawal thereof are requested.

Although the terms objected to by the Examiner are not English words that are typically utilized in everyday conversation, they are indeed English words as evidenced by the attached copy of the relevant page from a Japanese-English dictionary. However, in order to expedite prosecution, these phrases have been substituted in the claims with the more common terms "productivity" and "life-span", respectively, since the invention increases the productivity of the poultry as well as their life span. This amendment merely clarifies the invention and does not narrow the scope of the invention. No new matter has

been added.

In view of the amendments to the claims and the remarks hereinabove, reconsideration and withdrawal of the objection to the specification are respectfully requested.

**Claim Objections**

Claims 13-23 are objected to by the Examiner as not further limiting the subject matter of a base claim. Accordingly, claims 13-23 have been cancelled without prejudice or disclaimer of the subject matter contained therein and claims 41-55 have been substituted therefor. These amendments merely clarify the invention and do not narrow the scope of the invention. No new matter has been added.

In view of the cancellation of claims 13-23, reconsideration and withdrawal of the objection of these claims are respectfully requested.

**Rejections Under 35 U.S.C. 112**

Claims 1-40 are rejected by the Examiner under 35 U.S.C. 112, second paragraph, for the reasons set forth on pages 3-5 of the Office Action. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

Claims 1-40 have been amended to address the matters raised by the Examiner. None of the amendments that are made to address the rejections under 35 U.S.C. 112, second paragraph, narrow the scope of the invention. The amendments that are made in response

to the rejections under 35 U.S.C. 112 are made to merely clarify the scope of the invention. No new matter has been added.

With respect to the Examiner's comments concerning claims 31-32 in the last paragraph on page 4 of the Office Action, attached hereto are various publications that support Applicants' position that the phrase "highly unsaturated fatty acid" is an art recognized term. Moreover, the term "high content" in the context of the invention clearly means "to enrich" or "to increase the amount of."

In view of the amendments to the claims and the remarks hereinabove, reconsideration and withdrawal of the rejection of claims 1-40 under 35 U.S.C. 112, second paragraph, are respectfully requested.

**Rejection of Claims 1, 4-7 and 13-23 Under 35 U.S.C. 102(b) Over EP 557 627 to Aoyama and Under 35 U.S.C. 102(e)(2) Over U.S. Patent 5,811,148 to Chiu et al.; Rejection of Claims 1 and 24-40 Under 35 U.S.C. 103(a) Over EP 557 627 to Aoyama and U.S. Patent 5,811,148 to Chiu et al. in View of JP 8-173055 to Hoshida**

Claims 1, 4-7 and 13-23 are rejected by the Examiner under 35 U.S.C. 102(b) over EP 557 627 to Aoyama and under 35 U.S.C. 102(e)(2) over U.S. Patent 5,811,148 to Chiu et al. for the reasons set forth on page 5, last paragraph through page 6 of Office Action. Claims 1 and 24-40 are rejected by the Examiner under 35 U.S.C. 103(a) over EP 557 627 to Aoyama and U.S. Patent 5,811,148 to Chiu et al. in view of JP 8-173055 to Hoshida for the reasons set forth on page 7, last two paragraphs through page 8 of Office Action. These rejections are respectfully traversed.

Reconsideration and withdrawal thereof are requested.

At least claim 2 is free of this rejection. Thus, the incorporation of the subject matter of claim 2 into claim 1 clearly overcomes these rejections.

Accordingly, in view of the incorporation of the subject matter of claim 2 into claim 1, these rejection are moot.

Rejection of Claims 1, 2, 4, 8-12 and 24-40 Under 35 U.S.C. 103(a) Over EP 557 627 to Aoyama and U.S. Patent 5,811,148 to Chiu et al. in View of JP 8-173055 to Hoshida and Further In View of JP 8-266230 to Yamane et al. and JP 9-322 716 to Kobayashi et al.; Rejection of Claims 1-4, 8-12 and 24-40 Under 35 U.S.C. 103(a) Over EP 557 627 to Aoyama and U.S. Patent 5,811,148 to Chiu et al. in View of JP 8-173055 to Hoshida and Further In View of JP 8-266230 to Yamane et al. and JP 9-322 716 to Kobayashi et al. And Further In View of JP 5-192091 to Tokuhiko et al.

Claims 1, 2, 4, 8-12 and 24-40 are rejected by the Examiner under 35 U.S.C. 103(a) over EP 557 627 to Aoyama and U.S. Patent 5,811,148 to Chiu et al. in view of JP 8-173055 to Hoshida and further in view of JP 8-266230 to Yamane et al. and JP 9-322 716 to Kobayashi et al. for the reasons set forth on page 9 of the Office Action. Claims 1-4, 8-12 and 24-40 are rejected by the Examiner under 35 U.S.C. 103(a) over EP 557 627 to Aoyama and U.S. Patent 5,811,148 to Chiu et al. in View of JP 8-173055 to Hoshida and further in view of JP 8-266230 to Yamane et al. and JP 9-322 716 to Kobayashi et al. and further in view of JP 5-192091 to Tokuhiko et al. for the reasons set forth at page 10 of the Office Action. These rejections are respectfully traversed. Reconsideration and withdrawal thereof are requested.

At least claim 5 is free of these rejections. Thus, the

incorporation of the subject matter of claim 5 into claim 1 clearly overcomes these rejections.


Accordingly, in view of the incorporation of the subject matter of claim 5 into claim 1, these rejection are moot.

Attached hereto is a marked-up copy of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version With Markings Showing Changes Made

**VERSION WITH MARKINGS SHOWING CHANGES MADE**

**IN THE SPECIFICATION**

The paragraph beginning on page 2, line 23 and ending on page 3, line 11, has been amended as follows:

On the other hand, there have been known some techniques in which a degradation product of a polysaccharide is added to a mammalian or bird feed. Japanese Patent Laid-Open No. Hei 8-099884 reports that a degradation product of a polysaccharide, as well as in combination with tannin, has been effective in suppressing the growth of gram-negative bacteria. Japanese Patent Laid-Open No. Hei 6-329548 reports that an enzymatically degraded product of guar gum is added to a livestock feed, [whereby] promoting bowel movement, thereby giving prophylactic and therapeutic effects on diarrhea and the like. In addition, Japanese Patent Laid-Open No. Hei 10-201428 discloses a mineral absorption-promoting feed composition containing galactomannan treated to have a lower molecular weight. However, none of these techniques are involved with improvement of the producibility of laying hens bred for the purpose of producing chicken eggs and the producibility of edible chickens bred for the purpose of producing chicken meat.

IN THE CLAIMS

Claims 2, 5 and 13-23 have been cancelled.

The claims have been amended as follows:

Claim 1 (Amended) A [producibility] productivity improver for poultry, comprising:

(i) a polymannose having a molecular weight distribution in which a polymannose having the molecular weights ranging from  $1.8 \times 10^3$  to  $1.8 \times 10^5$  accounts for 70% [wt%] or more, the polymannose having a viscosity of 130 cps or less at 5°C in a 5% by weight aqueous solution as determined by Brookfield viscometer, and

(ii) a polyphenol compound.

Claim 3 (Amended) The [producibility] productivity improver according to claim [2] 1, further comprising a delipidated rice bran.

Claim 4 (Amended) The [producibility] productivity improver according to [any one of] claims 1 [to] or 3, wherein the polymannose contains a polymannose having a degree of polymerization of 30 to 40 in an amount of 25% or more.

Claim 6 (Twice Amended) The [producibility] productivity improver according to claim 1, wherein the polymannose is a polygalactomannan.

Claim 7 (Amended) The [producibility] productivity improver according to claim 6, wherein the polygalactomannan is an enzymatically degraded product of a substance selected from the group consisting of guar gum, locust bean gum and tara gum.

Claim 8 (Twice Amended) The [producibility] productivity improver according to claim [2] 1, wherein the polyphenol compound is obtainable from a hydrothermally extracted fraction of a plant of the camellia family.

Claim 9 (Amended) The [producibility] productivity improver according to claim 8, wherein the plant of the camellia family is tea.

Claim 10 (Twice Amended) The [producibility] productivity improver according to claim 1 [2], wherein the polyphenol compound is obtainable from a hydrothermally extracted fraction of green tea.



Claim 11 (Twice Amended) The [producibility] productivity improver according to claim [2] 1, wherein the polyphenol compound is at least one compound selected from the group consisting of (+)-catechin, (+)-gallocatechin, (-)-gallocatechin gallate, (-)-epicatechin, (-)-epicatechin gallate, (-)-epigallocatechin, (-)-epigallocatechin gallate, free teaflavin, teaflavin monogallate A, teaflavin monogallate B, and teaflavin digallate.

Claim 12 (Amended) The [producibility] productivity improver according to claim 11, wherein the polyphenol compound comprises (-)-epigallocatechin gallate.

Claim 24 (Twice Amended) A method of improving productivity [producibility] for [laying] hens that lay eggs or edible chicken, [using the producibility] which comprises feeding the productivity improver of claim 1 to hens that lay eggs or to edible chicken.

Claim 25 (Amended) The method of improving productivity [producibility] according to claim 24, wherein [decrease of liveability of laying hens is suppressed] the life span of hens that lay eggs is increased.

Claim 26 (Amended) The method of improving [producibility] productivity according to claim 24, which is [used] for at least any one of i) [increase] increasing in each egg the weight of eggs produced by [laying] hens that lay eggs; ii) [increase] increasing in an amount of eggs produced per day; iii) [increase] increasing in number of eggs produced; iv) [increase] increasing [in a] the weight of produced eggs; and v) [improvement] improving [in a] the rate of egg production for [laying] hens that lay eggs.

Claim 27 (Amended) The method of improving [producibility] productivity according to claim 24, wherein decrease in Haugh unit of eggs produced by [laying] hens that lay eggs is suppressed during [the] storage.

Claim 28 (Amended) The method of improving [producibility] productivity according to claim 24, wherein decrease in vitamin E content of eggs produced by [laying] hens that lay eggs is suppressed during [the] storage.

Claim 29 (Amended) The method of improving [producibility] productivity according to claim 24, wherein decrease in highly unsaturated fatty acid content of eggs produced by [laying] hens that lay eggs is suppressed during the storage.

Claim 30 (Amended) The method of improving [producibility] productivity according to claim 24, wherein decrease in content of a fatty acid selected from the group consisting of linoleic acid, arachidonic acid,  $\alpha$ -linolenic acid, eicosapentaenoic acid, docosapentaenoic acid, DHA and EPA in eggs produced by [laying] hens that lay eggs is suppressed during the storage.

Claim 31 (Amended) The method of improving [producibility] productivity according to claim 29, wherein the eggs are produced from a [laying] hen that lays eggs reared with a feed which allows for an increased amount of a highly unsaturated fatty acid in the eggs [to be contained in a high content].

Claim 32 (Amended) The method of improving [producibility] productivity according to claim 30, wherein the eggs are produced from a [laying] hen that lays eggs reared with a feed which allows for an increased amount of a fatty acid selected from the group consisting of linoleic acid, arachidonic acid,  $\alpha$ -linolenic acid, eicosapentaenoic acid, docosapentaenoic acid, DHA and EPA in the eggs [to be contained in a high content].

Claim 33 (Amended) The method of improving [producibility] productivity according to claim 24, wherein the life span of edible chickens is increased [decrease of liveability of edible

chickens is suppressed].

Claim 34 (Amended) The method of improving [producibility] productivity according to claim 24, wherein a body weight gain of edible chickens is improved, or a weekly body weight gain of edible chickens is improved.

Claim 35 (Amended) The method of improving [producibility] productivity according to claim 24, wherein freshness of chicken meat produced by edible chickens is [kept] maintained.

Claim 36 (Amended) The method of improving [producibility] productivity according to claim 24, which is [used] for at least one of i) suppression of increase in K value of chicken meat of edible chickens; ii) suppression of increase in TBA value of chicken meat; and iii) suppression of increase in POV value of chicken meat.

Claim 37 (Amended) The method of improving [producibility] productivity according to claim 24, wherein cholesterol content of chicken meat produced by edible chickens is reduced.

Claim 38 (Amended) The method of improving productivity [producibility] according to any one of claims 25 to 32, which comprises [wherein a period of addition to a] supplying the productivity improver of claim 1 to [feed for the laying] hens

that lay eggs for [is] at least 4 months after the [laying] hens are housed in a poultry house.

Claim 39 (Amended) The method of improving productivity [producibility] according to any one of claims 33 to 37, which comprises [wherein a period of addition to a supplying] feeding the productivity improver of claim 1 to [feed for the] edible chickens no later than [is at latest] 2 weeks before completion of rearing to the time of completion of rearing.

Claim 40 (Twice Amended) The method of improving [producibility] productivity according to claim 24, which comprises [comprising] feeding a mixture prepared by formulating a polymannose in an amount of 0.005 to 0.1 parts by weight and a polyphenol compound in an amount of 0.005 to 0.1 parts by weight, and optionally [in a case of formulating a delipidated rice bran, further formulating] 0.05 to 0.5 parts by weight of [the] delipidated rice bran thereto, based on 100 parts by weight of the mixture [supplying feed].



